IN THE CLAIMS:

Please cancel Claims 1-10 and 21-28 and substitute therefore new Claims 29-45.

Claims 1-10 (canceled)

Claims 11-20 (previously canceled)

Claims 21-28 (canceled)

29. (New) A solid-state chemical vapor generator, comprising:

(a) a housing having a vapor inlet and a vapor outlet;

(b) means for controlling the temperature within said housing;

(c) at least one gas impermeable, thermally conductive container disposed within said housing, wherein a first end of said at least one gas impermeable container is connected to said vapor inlet and a second end of said at least one gas impermeable container is connected to said vapor outlet;

(d) an adsorption article contained within said at least one gas impermeable, thermally conductive container, said adsorption article comprising a chemical adsorbate material substantially uniformly distributed on and at equilibrium with an adsorbent material, such that said adsorption article releases a controlled amount of chemical adsorbate vapor into said gas impermeable container based on the temperature maintained in said housing; and

(e) means for introducing a continuous flow of an inert gas into said vapor inlet, through said at least one gas impermeable container, and out said vapor outlet, thereby delivering a continuous flow of controlled concentration of chemical adsorbate vapor, wherein said concentration of chemical adsorbate vapor is determined by the temperature maintained in said housing, the amount of the

chemical adsorbate uniformly applied to said absorbent, and the flow rate of inert gas through said at least one gas impermeable container.

30. (New) The solid-state chemical vapor generator of claim 29, further comprising a protective casing surrounding said housing, said protective casing having a vapor inlet and a vapor outlet operably connected to said housing vapor inlet and said housing vapor outlet, respectively.

31. (New) The vapor generator of claim 30, wherein said protective casing comprises a material selected from the group consisting of metals and plastics.

32. (New) The vapor generator of claim 29, wherein said housing comprises a material selected from the group consisting of metals, ceramics, glass, and plastics.

33. (New) The vapor generator of claim 29, further comprising a filter and a moisture trap operably positioned between said means for introducing an inert gas and said housing vapor inlet.

34. (New) The vapor generator of claim 29, wherein said at least one gas impermeable, thermally conductive container comprises a plurality of gas impermeable, thermally conductive containers, wherein each of said containers have different amounts of said chemical adsorbate material loaded onto said adsorbent material.

35. (New) The vapor generator of claim 29, wherein said means for controlling temperature within said housing is capable of adjusting the temperature within said housing between the prevailing ambient temperature and the thermal decomposition temperature of the adsorbent-adsorbate pair.

36. (New) The vapor generator of claim 35, wherein said means for controlling temperature comprises controlled heating means disposed within said housing, said heating means selected from the group consisting of cartridge heaters, strip heaters, and tubular heating elements.

37. (New) The vapor generator of claim 29, wherein said gas impermeable container comprises a sorbent tube.

38. (New) The vapor generator of claim 37, wherein said sorbent tube includes a solid adsorbent material selected from the group consisting of activated non-synthetic carbon, activated synthetic carbon, silicas, aluminas, and combinations thereof.

39. (New) The vapor generator of claim 38, wherein said solid adsorbent material comprises a micro-porous material.

40. (New) The vapor generator of claim 29, wherein said chemical adsorbate material is selected from the group consisting of chemical warfare agents, toxic industrial chemicals, narcotics, and explosives.

41. (New) The vapor generator of claim 29, wherein said vapor generator is capable of continuously delivering an adsorbate chemical vapor in an inert gas over a range of concentrations from about 100 parts per million (ppm) to about 1 part per trillion (ppt).

42. (New) The vapor generator of claim 29, wherein said vapor generator is capable of continuously delivering a low volume of adsorbate chemical vapor in inert gas, wherein said volumes are less than 250 sccm.

43. (New) The vapor generator of claim 29, further comprising a chemical air monitoring device connected to the vapor outlet of said housing, so that said vapor generator continuously passivates all surfaces in contact with chemical adsorbate vapor flow.

44. (New) The vapor generator of claim 43, wherein said vapor generator serves as an internal calibration device for said chemical air monitoring device.

45. (New) The vapor generator of claim 29, further comprising means for providing a dilution stream of inert gas to said adsorbate chemical vapor flow after said adsorbate chemical vapor flow exits said at least one gas impermeable container, so that said dilution stream can be used to vary the adsorbate chemical vapor concentration.